The current drought has created an urgent water resource management problem in several regions. In many areas individuals are drilling deep bores and pumping water for irrigation. There are numerous reports of falling underground water levels, particularly where bores have been drilled in the vicinity of kareze villages. In many cases technical data on underground water reserves and their capacity for replenishment are not available. It is clear however, that current activities have the potential to do long-term damage to the entire system of agriculture based on underground water and the large population this supports in hundreds of small villages across the countryside.

A rapid survey should be undertaken to assess the impact that random drilling and pumping activities are having on underground water resources. Once the scale of the problem is known, then actions can be planned to better manage the use of underground water to protect the resource for communities, rather than for individual benefit.

2.5 IMPROVE AGRICULTURAL MARKETS

There must be functioning markets to link the food producers with the consumers. Supplies of wheat, meat and fruit are food for the population and a source of cash incomes for the producers. The agricultural marketing infrastructure in Afghanistan suffered badly as a result of the war. The damage to roads, communications systems and processing facilities have all had a major impact on farmers' ability to sell their product. The lack of civil order, with random road tolls and theft in the period up to 1997, was particularly damaging for those who were trying to move agricultural products to market.

However, the climate and soils to grow quality fruit and nuts are still there. There has been considerable improvement in civil order, and repairs are being implemented on the arterial roads. Given the capacity to prepare and deliver their produce, there is every reason to believe that Afghan farmers can again be serious suppliers to national, regional and world markets.

Specific Objective 2.1.1	Facilitate the development of local and export markets for agricultural products
Intervention level	Farmers and households, agricultural traders
Approach	Improve the skills of farmers and traders in product grading and presentation, facilitate linkages between farmers and traders, assist in the development of local storage and small-scale processing and improve access to information along the marketing chain.

With poor communications, many farmers are unaware of the opportunities for price improvement with better presentation and grading. Local preservation techniques such as sulphur dusting of dried apricots can reduce wastage and add considerable value to their products. Better information would help overcome gluts of vegetables such as onions which have occurred in recent years. A number of small-scale programs implementing these ideas are already underway, but much more needs to be done, and on a wider scale. Project concepts to facilitate improvements in agricultural markets are set out in Table 7.

Table 7. Improvements in agricultural markets

No	Interventions and Activities	Target Group	Time period	Linkages
2.1	**Immediate Objective 2.1 Improve the functioning of agricultural markets**			
2.1.1	**Facilitate the development of local and export markets for agricultural products**			
.01	Develop farmers knowledge of grading and presentation of fruits and nuts for market	Farmers/Traders	Short-medium	2.2.1.05
.02	Increase market opportunities for farmers by facilitating linkages with competent traders	Farmers/Traders	Short-medium	2.2.2.04
.03	Assist local development of storage and small-scale processing of agricultural products	Farmers/Traders	Short-medium	2.3.2.03
2.1.2	**Increase farmers access to relevant market information**			
.01	Develop systems to gather and disseminate accurate quantity and price data	Farmers/Traders	Short-medium	
.02	Develop systems for distributing key market data at district and subdistrict level	Farmers/Traders	Short-medium	2.1.1.01

2.6 INCREASE PRODUCTIVE SKILLS

Earning an income through gainful employment is a clear priority in enabling Afghans to provide for themselves. While this is particularly important in urban areas, it is also a major survival strategy for many rural households. In Afghanistan's war-torn and ravaged economy, the place to start in raising productivity and employability is in the home and on the farm. Basic skills and knowledge of home gardening, small-scale food production and food preservation will enable women and girls to positively contribute to household food supply. Improved technical knowledge on production, crop care and pest control will enable farmers to raise the productivity of their resources of labour, land and water.

Specific Objective 2.2	Raise productivity and employment capacity of the farm and household workforce
Intervention level	Individuals and households in rural and city areas
Approach	Train trainers and then implement home and farm-based training for individual men and women in a range of activities directly related to food production and sale.

There are sufficient positive experiences to show that training for women is feasible and will reap benefits for the household economy. Strongly positive results have also been gained from training for young people in directly marketable skills such as bakery, carpentry, carpet weaving, engine repair bricklaying, motor mechanics and radio repairs. Several NGO-implemented programmes exist which started in refugee camps and are now also conducted in-country. Many trainees have become self-employed or are now in wage employment, all of which contributes to increasing economic activity with positive flow-on effects. Project concepts for increasing productive skills are outlined in Table 8.

Table 8. Increase productive skills

No	Interventions and Activities	Target Group	Time period	Linkages
2.1.1	**Raise productivity and employment capacity of the farm and household workforce**			
	- Train women trainers to provide basic within-household instruction in production activities vegetables, animal care, poultry, honey and food preservation + storage and handicrafts	Women trainers	Short-term	
	- Provide home-based training to women's groups on food production and preservation	Women/girls	Short-medium	
	- Provide home-based training to women's groups in production and sale of handicrafts	Women/girls	Short-medium	
	- Improve farmers' knowledge, skills and productivity through Farmers Field Schools	Farmers	Short-medium	
2.1.2	**Raise the opportunities for employment through skills development**			
.01	- Develop regionally-based training capacity for trades skills	Agency/NGO	Short-medium	
.02	- Develop and offer regionally-based training courses in trades skills	Agency NGO	Short-medium	
.03	- Men and women undertake training in trades and other employment skills	Men + women	Short-medium	
.04	- Provide micro-credit for trained persons to start their own businesses	Men + women	Short-medium	2.2.1.02

2.7 INCREASE ECONOMIC INDEPENDENCE

A central function of a national government is to create an environment where investment can succeed and generate employment providing individuals and households economic independence. After 20 years of war and without a recognised central government, the ruined state of much of the civil infrastructure has reduced economic activity in some areas to the most basic forms. With a sense of stability now apparent in much of the country, there are positive examples where opportunities for local investment to stimulate economic activity have produced significant advances in economic activity and employment.

Specific Objective 2.3	Increase economic independence
Intervention level	Individuals and households in rural and city areas, local, and regional authorities
Approach	Assistance with group-based micro-finance to individuals to start or increase economic activity and employment and

cooperation with local or regional authorities to improve economic activity by refurbishing infrastructure.

The potential for micro-finance to generate individual economic activity and self-employment or employment for others is well understood. While many of the success stories are from other countries, there has been sufficient positive experience in Afghanistan to be confident that when properly managed, micro-finance for individuals will work. Project concepts for generating economic independence for individuals are set out in Table 9.

Table 9. Increase economic independence

No	Interventions and Activities	Target Group	Time period	Linkages
2.2	**Immediate Objective 2.2 Increase economic independence**			
2.2.1	**Develop group-based micro-finance schemes for investment and job creation**			
.01	- Develop group-based micro-finance schemes with reference to job creation prospects	Agency/comn'ty	Short-medium	
.02	- Implement group-based micro-finance schemes under close supervision	Men + women	Short-medium	2.4.1.03
2.2.2	**Raise the opportunities for employment through economic development**			
.01	- Identify selective infrastructure investments with high employment spinoff	Agencies	Medium-long	
.02	- Negotiate collaborative investment agreements where possible	Agency/Auth'ty	Medium-long	
.03	- Undertake selective infrastructure investments in regional areas	Agency/Auth'ty	Medium-long	

2.8 STRATEGIC ACTIVITIES SUMMARY

The strategic activities for food security are summarised in Table 10. Six stylised locations are identified which are not geographic places but represent combinations of agricultural (food producing) potential and access to services described in Section 1.3. The degree to which the various interventions are applicable to these locations are indicated by X. The number of Xs approximates to the degree of regional importance of the intervention or the capacity to contribute to food security. Some interventions are indicated on a general countrywide basis without any attempt being made to indicate local relevance. The indications are tentative only and subject to revision.

The locations can be described as:

1. **Accessible, high productivity:** This location represents the densely settled areas around the main cities where agricultural potential is high and there are adequate roads and services. Includes Nangarhar, the Arghandab and Helmand valleys, Herat, Mazar-Balkh-Shiberghang, Kunduz, Takhar and around Kabul.

2. **Distant, high productivity:** Typically the outer fringes of Location 1, but where poorer roads and infrastructure limit access to services. Includes areas such as Ghazni, Paktia, Paktika and Zabul, the upper reaches of the tributary valleys to the Kabul river and Farah.

3. **Distant, lower productivity:** The outer fringes of Location 2, where increasing altitude makes the growing season shorter, irrigable areas are smaller and water resources less reliable. Most of Oruzgan and Zabul, upper reaches of Konar and Kapisa.

4. **Rainfed areas:** Mostly the northern foothills and plains in an arc from Badghis to Baghlan. Also includes some of northern Qandahar

5. **Remote, high altitude:** Bamiyan, Ghor and Badakhshan, where a combination of poor roads, long distances and short growing season make economic activity and food self-sufficiency a continual struggle.

6. **Urban areas:** Particularly Kabul, but also Qandahar, Herat and Mazar-i-Sharif. Because of its proximity to Pakistan, Jalalabad is something of a special case as there are greater opportunities for economic activity and employment.

Table 10. Strategic activities to improve food security in Afghanistan by region

No	Interventions and Activities	Target Group	Time period	Linkages	Location					
					1	2	3	4	5	6
1.0	**OBJECTIVE 1. AGRICULTURAL DEVELOPMENT FOR FOOD SECURITY**									
1.1	**Immediate Objective 1.1 Protect lives through food aid**									
1.1.1	**Deliver food assistance to poor and needy**									
.01	- Undertake needs assessments to identify 'at risk' groups	Vulnerable	Short-term		X	XX	XXX	XXX	XXX	XXX
.02	- Quantify needs and organise targeted assistance packages		Short-term		X	XX	XXX	XXX	XXX	XXX
.03	- Deliver food aid to identified 'at risk' target groups and areas of need	At risk groups	Short-term	1.2.1	X	XX	XXX	XXX	XXX	XXX
1.1.2	**Food for work to strengthen long-term agricultural production**									
.01	- Undertake multi-agency/NGO collaborative needs assessments in rural areas	Rural households	Short-term							
.02	- Identify agricultural development activities which can be packaged with food aid		Short-term							
.03	- Prepare and implement 'food for agricultural development work' packages	Rural households	Short-medium	1.3-01, 02	XXX	XXX	X	X	X	
1.2	**Immediate Objective 1.2 Strengthen food security through raising agricultural output**									
1.2.1	**Raise crop technology and husbandry levels**									
.01	Provide quality seed of appropriate varieties of winter and summer crops									
.01.a	- high yield/high input irrigated varieties	Farm families	Short-medium	1.2.3.01	XXX	XXX	XXX			
.01.b	- high altitude/low input short season varieties	Farm families	Short-medium						XXX	
.01.c	- rainfed varieties	Farm families	Short-medium					XXX	XX	
.02	Develop self-sustaining system for seed multiplication, processing, storage and management	Farmers	Short-medium	1.2.1.01	XXX	XXX	X	XXX	X	
.03	Encourage local availability of inputs (fertiliser, agrochemicals and small-scale equipment)	Traders	Short-medium		XXX	XXX	X	X	X	
.04	Extend seed laboratory network for quality control	Agencies	Short-medium		X	X	X	X	X	
1.2.2	**Improve animal health, husbandry and nutrition**									
.01	- Improve animal nutrition through selected fodder crops, fodder trees and supplements	Farmers/kuchis	Short-medium		XX	XX	XX	XX	X	
.02	- Widen network of extension workers through BVW training and linkage to other projects	Farmers/kuchis	Medium-long		XX	XX	XX	XX	X	
.03	- Assist in animal health control through provision/transport of medicines and vaccines	Farmers/kuchis	Short-medium				XX	XX	XX	
.04	- Develop high quality feed sources from agricultural processing byproducts (oilcake etc)	Farmers	Medium-long		XX	XX	XX	X	X	
.05	- Assist in the development of winter housing for livestock	Farmers/kuchis	Short-medium				XX		XXX	
1.2.3	**Increase crop/livestock integration**									
.01	- Identify high yielding varieties of crops with improved fodder residue characteristics	Farmers	Short-medium	1.2.1.01.a	XXX	XXX	XX	XX	X	
.02	- Develop animal/fish/plant systems to maximise byproduct/inter-product use	Farm families	Short-medium	1.2.5.02	XXX	XXX	XX	XX	X	
1.2.4	**Improved grazing land utilisation/management**									
.01	- Investigate effect on pastures of prolonged non-grazing periods resulting from mines	Kuchis	Medium-long					XX	XX	
.02	- Implement community consultations with kuchi groups on rangeland management	Agencies/Kuchis	Medium-long				XX	XX	XX	
.03	- Develop options for grazing management within the traditional pastoral system	Kuchis/Agencies	Medium-long				XX	XX	XX	
1.2.5	**Increase horticultural and integrated agroforestry activity and production**									
.01	- Extend the development of horticultural nurseries and orchards for commercial fruit production	Farmers	Short-medium		XXX	XXX	XX	XX	X	
.02	- Use Farmers Field Schools to raise standards of orchard management and husbandry practices	Farmers	Short-medium		XXX	XXX	XX	XX	X	
.03	- Train trainers in Integrated Pest Management (IPM), crop care and presentation of produce	Expert farmers	Short-medium							
.04	- Assist in the development of markets for commercial fruit production	Farmers/Traders	Short-medium		XXX	XXX	XX	XX	X	
.05	- Develop horticulture-based agroforestry system for fruit, nuts and timber	Farmers	Medium-long		XX	XX	XX	XX	X	
.06	- Develop animal-linked horticultural-based agroforestry systems (mulberry-silk-fish and orchard-fish-duck)	Farm families	Medium-long	1.2.3.02	XX	XX				
.07	- Develop integrated herbaceous legume/wheat cropping system	Farmers	Medium-long		XX	XX	XX	XX	XX	
.08	- Develop extensive fodder tree and fuel wood tree production for grazing land improvement	Farmers/kuchis	Medium-long		XX	XX	XXX	XXX	XXX	

Key to regions: 1 = Accessible, high productivity; 2 = Distant, high productivity; 3 = Distant lower productivity; 4 = Rainfed; 5 = Remote, high altitude; 6 = Urban
Key to applicability of interventions: No of Xs approximates to the degree of regional importance of the intervention or the capacity to contribute to food security

Table 10. Strategic activities to improve food security in Afghanistan by region (continued)

No	Interventions and Activities	Target Group	Time period	Linkages	Location					
					1	2	3	4	5	6
1.3	**Immediate Objective 1.3 Stabilise food security by water resource management**									
1.3.1.	**Increase/stabilise food production by improved irrigation efficiency**									
.01	- Commence effective system-wide planning of individual irrigation systems on regional basis	Communities	Short-ongoing	1.3.2.01	X	X			X	
.02	- Identify and implement canal and drainage refurbishment activities	Irrigation Farmers	Short-medium	1.1.2.03	XXX	XXX	XX	XX	X	
.03	- Design and implement replicable mechanised high-tech in-field levelling system	Irrigation Farmers	Short-medium		XXX	XXX	XX	XX	X	
.04	- Develop community concepts of water-use efficiency and train mirabs	Farmers/Mirabs	Short-medium		XXX	XXX	XX	XX	X	
.05	- Support mirabs with extension activity	Mirabs/Wakils	Short-medium		XXX	XXX	XX	XX	X	
1.3.2	**Develop regional water resource management policies and actions**									
.01	- Undertake rapid surveys of drought impacts on water resource utilisation	Agencies	Short-ongoing	1.3.1.01	X	X	X	X	X	X
.02	- Develop regional/district-based responses to identified water resource management problems	Agency/Authority	Short-medium	1.3.1.02	X	X	X	X	X	X
.03	- Assist regional/local authorities/communities to implement resource protection actions	Auth'ty/community	Short-medium		X	X	X	X	X	X
2.0	**OBJECTIVE 2. ECONOMIC DEVELOPMENT FOR FOOD SECURITY**									
2,1	**Immediate Objective 2.1 Improve the functioning of agricultural markets**									
2.1.1	**Facilitate the development of local and export markets for agricultural products**									
.01	Develop farmers knowledge of grading and presentation of fruits and nuts for market	Farmers/Traders	Short-medium	2.2.1.05	XXX	XX	XX	XX	XXX	
.02	Increase market opportunities for farmers by facilitating linkages with competent traders	Farmers/Traders	Short-medium	2.2.2.04	XXX	XX	XX	XX	XXX	
.03	Assist local development of storage and small-scale processing of agricultural products	Farmers/Traders	Short-medium	2.3.2.03	XXX	XX	XX	XX	XXX	
2.1.2	**Increase farmers access to relevant market information**									
.01	Develop systems to gather and disseminate accurate quantity and price data	Farmers/Traders	Short-medium		XX	XX	XX	XX	XX	
.02	Develop systems for distributing key market data at district and subdistrict level	Farmers/Traders	Short-medium	2.1.1.01	XX	XX	XX	XX	XX	
2.2	**Immediate Objective 2.1 Increase productive skills**									
2.2.1	**Raise productivity and employment capacity of the farm household/workforce**									
.01	- Train women trainers to provide basic within-household instruction in production activities									
.02	vegetables, animal care, poultry, honey and food preservation + storage and handicrafts	Women trainers	Short term		XX	XX	XX	XX	XX	XXX
.03	- Provide home-based training to women's groups on food production and preservation	Women/girls	Short-medium		XX	XX	XX	XX	XX	XXX
.04	- Provide home-based training to women's groups in production and sale of handicrafts	Women/girls	Short-medium		XX	XX	XX	XX	XX	XXX
.05	- Improve farmers' knowledge, skills and productivity through Farmers Field Schools	Farmers	Short-medium	1.2	XXX	XXX	XX	XX	XX	
2.2.2	**Raise the opportunities for employment through skills development**									
.01	- Develop regionally-based training capacity for trades skills	Agency/NGO	Short-medium		X	X	X	X	X	XXX
.02	- Develop and offer regionally-based training courses in trades skills	Agency/NGO	Short-medium		X	X	X	X	X	XXX
.03	- Men and women undertake training in trades and other employment skills	Men + women	Short-medium		X	X	X	X	X	XXX
.04	- Provide micro-finance for trained persons to start their own businesses	Men + women	Short-medium	2.2.1.02	X	X	X	X	X	XXX
2.3	**Immediate Objective 2.2 Increase financial independence**									
2.3.1	**Develop group-based micro-finance schemes for investment and job creation**									
.01	- Develop group-based micro-finance schemes with reference to job creation prospects	Agency/community	Short-medium		X	X	X	X	X	XXX
.02	- Implement group-based micro-finance schemes under close supervision	Men + women	Short-medium	2.2.2.03	X	X	X	X	X	XXX
2.3.2	**Raise the opportunities for employment through economic development**									
.01	- Identify selective infrastructure investments with high employment spinoff	Agencies	Medium-long		X	X	X	X	X	XXX
.02	- Negotiate collaborative investment agreements where possible	Agency/Authority	Medium-long		X	X	X	X	X	XXX
.03	- Undertake selective infrastructure investments in regional areas	Agency/Authority	Medium-long		X	X	X	X	X	XXX

Key to regions: 1 = Accessible, high productivity; 2 = Distant, high productivity; 3 = Distant lower productivity; 4 = Rainfed; 5 = Remote, high altitude; 6 = Urban
Key to applicability of interventions: No of Xs approximates to the degree of regional importance of the intervention or the capacity to contribute to food security

1. THE STRATEGIC APPROACH

1.1 INTRODUCTION

Secure access to sufficient food is a basic human right. After more than 20 years of civil war and the accompanying destruction of infrastructure and the environment, the people of Afghanistan are struggling to sustain themselves. This problem must be seen against the background of a country that in the pre-war years was largely self-sufficient in food and a significant exporter of high quality fruit, silk, cotton and other agricultural products.

Since the collapse of the Communist government in 1992, substantial international assistance has been given to Afghanistan to enable the return of refugees and the re-establishment of agricultural production. Of necessity, much of this has been short-term, aimed at the rapid rehabilitation of basic productive resources damaged and destroyed in years of fighting. The results were encouraging. Within five years from 1992, the country produced an estimated 70% of its own food needs. However, the current drought has shown how fragile those gains were, with people once again forced from their homes by the prospect of starvation.

It need not be so. The Afghans are competent and hard working farmers. Given the opportunity they have the capacity to produce much of the national food requirements. What is needed to bring this about is an adjustment in the priorities for international assistance. Short-term and humanitarian assistance are of critical importance to the strategy. So too are longer-term actions to make the country more self-reliant and less dependent on emergency aid. This paper provides a framework for action to meet that goal.

1.2 ACCESS TO RESOURCES

Food security in Afghanistan is very much an issue of access to resources. For the rural households who make up more than 80% of the population, it is particularly a matter of access to land and water as the basic resources from which to produce their own food. For landless households and the urban population, it is more an issue of economic opportunity to earn a living.

The strategic approach to food security therefore starts by defining the various population groups in terms of their capacity to deal with food insecurity. In the context of Afghanistan, this capacity depends not only on who they are, but where they are. Distance and poor infrastructure can significantly influence what resources individuals can command to produce or buy their own food needs.

To identify possible interventions, the population can be divided into three broad categories representing their general level of food security: (i) those who are capable of being food self-sufficient; (ii) those who are potentially or marginally self-sufficient; and (iii) those who have limited opportunities to provide for the needs of themselves and their families at an acceptable level. Within each broad category, a series of subgroups can be identified, based on the level of resources they control and their likely capacity to be able to respond to actual or potential opportunities to take the initiative in meeting their food security needs. The groups and subgroups are:

Self-sufficient:

- Large landowners, merchants and traders
- Medium to larger farmers who own or rent sufficient land to at least provide for their food needs; medium-sized traders and shopkeepers; persons employed in salaried positions whose employer can afford to regularly pay their wages
- Kuchi (pastoral nomad) families with medium to large livestock herds

Potentially or marginally self-sufficient:

- Medium to small farmers with insufficient owned or rented land, or unreliable irrigation
- Sharecroppers with some resources, such as draught animals or other livestock
- Kuchi families with medium to small, but productive, livestock herds
- Rural or urban households with one or more members in distant employment sending home remittances
- Government employees
- Urban households with one or more members have some employment opportunities

Rarely or never self-sufficient:

- Farm labourers working on a crop-share basis
- Kuchi families with small, unproductive livestock herds, or no livestock
- Urban or rural landless families with unemployed adult men
- Ex-government employees with formal training who have no land or current livelihood
- Urban or rural landless families without adult men

While these groups can be seen in terms of a hierarchy of access to resources, they are not mutually exclusive nor necessarily permanent. There are specific interdependencies between certain groups such as the large landowners and the sharecroppers, who combine to grow food for their mutual benefit. The extended family also plays a role in food security. Widowed families may live within an extended family and be assisted with food by relatives in better-off male-headed households.

Since it is access to resources which defines food security, the divide is between those who actually or potentially control enough resources to provide for themselves, and those who do not. To improve food security, external assistance should aim to move this dividing line as far down the hierarchy of food insecurity as possible. Possible actions could include increasing the productive capacity of the resources available to groups at risk, or by generating economic activity which will provide gainful employment. Raising productivity levels across the agricultural sector also increases the capacity to produce surpluses for sale to non-farming and urban groups.

1.3 LOCATION

Location is very important in determining agricultural potential in Afghanistan. What food and how much can be produced to provide security, will vary according to location as well as with the scale of the resources available to households. Locked between harsh and arid mountain and desert areas are fertile and productive river valleys. Three-quarters of the land supports only sparse extensive grazing in mountain areas, while the five percent of the land which is in the irrigated valley floors produces 85% of national agricultural output. Altitude is important in determining productive potential, with a range from hot deserts at 600 metres above sea level up to permanent snow at over 7000 metres.

While the agricultural production pattern is relatively standard across Afghanistan, there are significant local differences between climatic regions in productivity and production priorities. In the food security context, there are four key production systems:

High productivity irrigation: With a relatively low annual cloud cover and high light intensity, Afghanistan has an excellent climate for irrigated agriculture. In the mountains, the climate is cool, the rivers are fast-flowing and the valley floors are narrow, permitting only relatively small irrigated areas. The climate is hotter in the lower downstream areas, with a longer growing season, and the wide valley floors support significantly larger irrigated areas. The production system changes only with altitude. In the lower areas, wheat is the principal winter crop, with maize, cotton, pulses and a variety of vegetable crops grown in the

summer. In some districts there are significant areas of perennial horticultural crops, particularly grapes, pomegranates, almonds and apricots.

In the higher, cooler areas, barley shares a place with wheat in the winter and the range of summer crops includes potatoes. In these areas the main tree crops are apples, peaches, apricots and walnuts. Mulberries are grown everywhere. In most areas alfalfa and clovers are grown in periodic rotations as fodder crops and to provide much-needed soil fertility.

Lower productivity irrigation: There are many areas which are marginal either because of growing season limitations or water shortages, or both. These are found in most areas, whether at higher altitudes, on desert margins or even at the lower end of large irrigation systems in favoured districts. Their common thread is unreliability of production due to climatic and water constraints. The high-input high-output systems of the more productive locations are inappropriate for farmers in these areas. To be successful, food security interventions must be tailored to these more stringent and unreliable conditions.

Rainfed production: Rainfall is low throughout Afghanistan, making rainfed agriculture precarious. However, the broad arable plains on the lower slopes north of the Hindu Kush mountains and smaller areas in the south often have sufficient autumn-winter rain to produce cereal crops. Because of the variability, this is a low-input, low-output system. In the very dry years, not even the seed is recovered. However with the very large areas available, in good years the rainfed system can produce large saleable surpluses, up to 800,000 tonnes or 20% of national needs. These areas need varieties of wheat which will respond to small amounts of rain and remain viable with long dry spells, which are quite different from the conditions under which irrigated wheat is produced.

High altitude areas: The alpine plains and upland valleys of the Hindu Kush have few water resources and a short growing season. While crop production is important in food security strategies, livestock are the major source of food for the two population groups which live in this area. Most numerous are the nomadic (kuchi) families who move widely across the high plains in the summer, with many retreating to the warmer lowlands in the winter. The other group is the settled households who have no retreat in the winter and must produce a year's supply of food in less than six months growing period. These people are isolated by long distances at the best of times, but in the winter they can be cut-off for months by snow and impassable roads.

In Afghanistan, geographic location not only sets the climatic and technical limits to production but generally defines access to services, inputs and markets. The population is widely scattered in the agricultural areas. While many live in large, densely populated areas, others are isolated in small communities, remote from large population centres. The impact on food security of the population distribution can be described in three broad groups.

The climatically favoured areas and larger river valleys are densely settled with significant population centres, roads and other civil infrastructure. In these areas it is appropriate to maximise the productivity of the scarce resources of water and land by using high technology inputs. Farmers in these areas mostly operate with high productivity irrigation systems and are well placed to take up the high technology options to increase food supply. Farming can be a commercial activity because roads and towns provide accessible markets to convert output to cash.

Many however, live away from these areas, often producing their food under more marginal irrigation or rainfed conditions. For these farmers, the poor state of public infrastructure means that access to inputs and markets is more difficult, prices are higher and supply less reliable. Under these conditions, high technology options are less economically attractive, or simply less possible. Similarly, selling product is more difficult and costly.

There is a third group who live not merely in distant but in remote communities. Here transport at best is by donkey or camel, travel is by walking, and there is little real chance of gaining access to inputs, services or markets. These areas often have limited water resources and significant climatic constraints to production. For farmers in these areas, the difficulties of obtaining inputs and services mean that across-the-board application of high technology solutions is not a realistic option.

It is possible describe the location of the various combinations of climate and access in terms of regions or individual provinces. However, few provinces fit exactly into one category. In many, agricultural production is a combination of a number of the systems described.

For the purposes of the Food Security Strategy, three broad location classes are defined:

Accessible: Located within reasonable distance of major population centres or public infrastructure such as roads. Generally high-productivity irrigation systems. Areas include most of the Eastern, Central and Southern regions, Herat, Mazar-i-Sharif, Kunduz and Takhar.

Distant: Located at a distance from major population centres or with poor access to public infrastructure such as roads. These areas include Ghazni, Paktia, Paktika, Zabul, Oruzgan, and the major rainfed agricultural areas of Farah, Badghis, Farayab, Jawzjan, Sar-i-Pul, Samangan and Baghlan.

Remote: Located in remote, communities, often in areas of significant climatic hazard for agriculture (low rainfall, short growing season, frost and snow). Areas include the Hazarajat (mostly Bamiyan and Ghor) and Badakhshan.

The linkages between the various food security groups, their location and opportunities for food security are set out in Table 1.

Table 1. Strategic activity matrix for farm-level food security

<table>
<tr><th rowspan="2">Category
Location</th><th colspan="3">Access to resources</th></tr>
<tr><th>Accessible</th><th>Distant</th><th>Remote</th></tr>
<tr><td>Self sufficient
- large landowners, merchants, traders
- medium to large area farmers
- persons in regularly paid employment
- kuchis with medium to large flocks</td><td rowspan="2">Group who are best placed to utilise present approaches to high-technology interventions with surplus output which can be marketed</td><td>High-technology solutions, but possibly at lower production levels and marketable surplus</td><td rowspan="2">Major emphasis on livestock as food source. Use better yielding low-input crop options Develop remote area economic activity to assist food security</td></tr>
<tr><td>Marginally self-sufficient
- medium to small area farmers
- sharecroppers and kuchis with some resources
- households with part-time employment or remittances</td><td>Help with better technology but will need support with micro-finance and access to inputs. Also increased economic activity for jobs</td></tr>
<tr><td>Not self-sufficient
- farm labourers working on share basis
- kuchis with few or no animals
- ex-government employees with no land
- landless families with unemployed adult men
- landless families without adult men</td><td colspan="3">The group most at risk from food insecurity. Best assisted by increased economic activity, through on or off-farm wage employment or in-home activities, to earn cash income to buy food.</td></tr>
</table>

The table presents in a compressed format the linkages between possible agricultural and other activities and the interventions which are thought most likely to assist the various groups in meeting their food security needs in the different locations. The activities and interventions should be seen as neither mutually exclusive nor prescriptive. The purpose is to provide a broad spatial perspective of how the options for food security actions can be linked to the diverse groups in the Afghan population in the wide range of locations in which they live.

2. THE STRATEGY

2.1 FRAMEWORK

The Food Security Strategy takes a long-term, open-ended view of actions to create food security. Afghanistan has a harsh and uncompromising climate and is dependent on a relatively small proportion of its land for the survival of the population. The emphasis therefore must be on utilising and protecting for the long-term, those scarce national resources which form the productive base for agriculture.

Specific proposals are made to strengthen national food production and to assist households to provide for their own food needs. The strategy provides a guide to where individual interventions or projects are needed and to whom they should be directed. It is presented within the following framework.

Goal:	Over the medium term, to develop productive, sustainable agricultural systems, based on the sound long-term utilisation and management of natural resources and develop other economic activities which will provide secure access to sufficient food to meet the needs of Afghan households as far as possible from within the national resources. In the short-run, ensure that the minimum food needs of vulnerable elements of the population are covered and minimise damage to the agricultural production base.
Objectives:	The longer-term development objectives are to: (i) foster food security by assisting agricultural development and protecting natural resources; and (ii) promote economic activity to strengthen markets for agricultural produce and to create employment, enabling individuals and households to have more chance of being food secure.
Activities:	Each development objective can be translated into a series of immediate objectives and activities (projects) to bring about the intended results. They include raising agricultural productivity and managing natural resources to enable agriculture to be sustainable; promoting agricultural markets and economic activity to expand employment and raise skill levels to improve labour productivity.
Intervention level:	The intervention level indicates the level at which any particular project activity will take place. This may be at farm or household level, or village, town, district, regional or national level. In recent years the most effective level has been the household and the village, as assistance can go directly to the recipient and is largely unaffected by the lack of government. As interventions move to a broader scale of district or regional level, they become more dependent on infrastructure and interaction with the authorities.
Approach:	Indicates the overall technical thrust of a particular group of activities. These could involve increasing resources used, intensifying agricultural production systems, facilitating access and improvements in market operation, increasing investment and employment or developing and implementing strategic policies.
Target Group:	This indicates the principal groups to whom the assistance would be directed. The proposals are indicative only.

2.2 PROTECTING LIVES

The drought conditions which have overtaken much of Afghanistan in 1999 and 2000 have led to severe food insecurity for many people, including serious and widespread food shortages in parts of the country. The yields of many irrigated crops have been severely reduced, while most rainfed crops were a total failure. Many households in these areas have already been forced to move. Increasing numbers are arriving every week at major centres such as Herat and Kabul. The first objective of the food security strategy therefore is to protect the lives of Afghans who are at risk as a result of the current climatic conditions and associated agricultural production shortfalls. While doing this, wherever possible interventions should also pave the way for future revival of agricultural production.

Immediate Objective 1.1	Protect lives through food aid
Intervention level	Internally displaced persons, vulnerable groups
Approach	Direct delivery of food and where possible, food-for-work activities to raise long-term agricultural productivity

The World Food Programme (WFP), together with a number of other agencies and NGOs have already commenced substantial food distribution programmes aimed where possible, to assist people to stay in their home areas rather than move. The situation is being made more urgent by the onset of winter, making access through mountain areas more difficult.

The necessity to provide food aid offers an opportunity in some areas to use a humanitarian response to underpin investment in raising longer-term agricultural productivity. There are major irrigation canal and drainage systems in need of rehabilitation in a number of areas. This work could be accomplished through an appropriate mix of hand labour and machinery. With little or no rain, the current low river flows offer an opportunity to undertake major repairs to river offtakes which would normally be full of water. Indicative project concepts associated with the objective of protecting lives are set out in Table 2.

Table 2. Protect lives through food aid

No	Project concepts by Immediate Objective Activity Level	Target Group	Time period	Linkages
1.1.1	**Deliver food assistance to poor and needy**			
.01	- Undertake needs assessments to identify 'at risk' groups	Vulnerable	Short-term	
.02	- Quantify needs and organise targeted assistance packages	Agencies/NGOs	Short-term	
.03	- Deliver food aid to identified 'at risk' target groups and areas of need	At risk groups	Short-term	1.2.1
1.1.2	**Food for work to strengthen long-term agricultural production**			
.01	- Undertake multi-agency/NGO collaborative needs assessments in rural areas	Rural h'holds	Short-term	
.02	- Identify agricultural development activities which can be packaged with food aid	Agencies/NGOs	Short-term	
.03	- Prepare and implement 'food for agricultural development work' packages	Rural h'holds	Short-medium	1.3.01,02

2.3 RAISING AGRICULTURAL OUTPUT

More than 85% of agricultural output in Afghanistan comes from barely 5% of the land area. The second objective of the food strategy is to ensure national food security by making this limited resource as productive as possible, while recognising the constraints of rational economic and environmental management. Raising the productivity and value of food and cash crops is a prime strategy in combating increased opium production.

Immediate Objective 1.2	Strengthen food security through raising agricultural output
Intervention level	Farmer and kuchi households, traders and agricultural suppliers
Approach	Intensifying irrigated agriculture with better crop varieties, increased use of fertiliser, appropriate pest control, improved animal health, husbandry and nutrition and better integration of crop, livestock and tree-based production systems.

3.2.1 Increased Crop Production

In 1992, an estimated six million Afghans were refugees in neighbouring countries. Since that time, the international and NGO community have made a concerted effort to assist the majority of these families to return to productive lives in their home country. Over the past eight years, a multitude of mostly small-scale and short-term interventions have enabled agricultural production to be re-established. The benefit of these activities can be seen from the fact that the country was estimated to be 70% self-sufficient in cereals from the 1997-98 harvest. Afghanistan has experienced rapid rates of population growth in recent years, which is adding to the pressure on an already stressed resource base.

These gains are not universal. To date most of the emphasis has been on households which are in accessible localities, such as the major irrigated valleys of eastern, southern and western Afghanistan. The Food & Agriculture Organisation has been operating a successful national programme of quality seed production for some years, with an annual output now exceeding 4000 tonnes of Quality Declared Seed (QDS). However, this is less than 10% of national seed needs if crop yields are to be lifted to a level that will ensure the target of national self-sufficiency is achieved. To date the programme has also lacked the resources to appropriately service the need of rainfed and remote areas.

Specific Objective 1.2.1	Raise crop technology and husbandry levels
Intervention level	Farmer households, traders and agricultural suppliers
Approach	Intensifying irrigated agriculture with quality seed for better crop varieties, increased use of fertiliser and appropriate pest control

The key activity in raising crop yields is to provide sufficient quantities of quality seed across a range of irrigated and rainfed crop types suitable for the various climatic conditions found in the country. This activity must be supported by locally-based seed processing, storage and management systems which would ensure the delivery of seed to those who need it. The existing national seed laboratory would be augmented on a regional basis for testing and quality control. Details are summarised in Table 3.

Table 3. Raising crop technology and production levels

No	Project concepts by Immediate Objective Activity Level	Target Group	Time period	Linkages
1.2.1	Raise crop technology and production levels			
.01	Provide quality seed of appropriate varieties of winter and summer crops			
a	- high yield/high input irrigated varieties	Farm families	Short-medium	1.2.3.01
b	- high altitude/low input short season varieties	Farm families	Short-medium	
c	- rainfed varieties	Farm families	Short-medium	
.02	Develop self-sustaining seed multiplication system, processing, storage and management	Farmers	Short-medium	1.2.1.01
.03	Encourage local availability of inputs (fertiliser, agrochemicals and small-scale equipment)	Traders	Short-medium	
.04	Extend seed laboratory network for quality control	Agencies	Short-medium	

3.2.2 Increased Livestock Production

With a national herd estimated at 3.7 million cattle, 22 million sheep, 9 million goats and 11 million poultry, livestock are a significant source of food. Many rural households have one or more cows and a number of sheep and goats. The nomadic kuchi population of 1.5 million people exists almost solely on livestock products. Livestock are also important in the household economy as a major form of savings and a source of cash income when needed.

Specific Objective 1.2.2	Improve animal health, husbandry and nutrition
Intervention level	Farmer and kuchi households, traders and agricultural suppliers
Approach	Improve animal productivity through better nutrition, disease control and housing.

The productivity of livestock in Afghanistan is low. Despite the efforts of farmers to produce fodder, most animals are poorly fed. The low quantity and nutritional quality of feed received by most animals is reflected in their poor productivity. As a result of limited knowledge on the part of farmers and the lack of resources for veterinary services, not enough is done to counter the widespread levels of chronic disease. Project concepts to deal with these issues are set out in Table 4.

Table 4. Improvement of animal health, husbandry and nutrition

No	Project concepts by Immediate Objective Activity Level	Target Group	Time period	Linkages
1.2.2	**Improve animal health, husbandry and nutrition**			
.01	Improve animal nutrition through selected fodder crops, fodder trees and supplements	Farmers/kuchis	Short-medium	
.02	Widen network of extension workers through BVW training and linkage to other projects	Farmers/kuchis	Medium-long	
.03	Assist in animal health control through provision/transport of medicines and vaccines	Farmers/kuchis	Short-medium	
.04	Develop high quality feed sources from agricultural processing byproducts (oilcake etc)	Farmers	Medium-long	
.05	Assist in the development of winter housing for livestock	Farmers/kuchis	Short-medium	
1.2.3	**Increase crop/livestock integration**			
.01	Identify high yielding varieties of crops with improved fodder residue characteristics	Farmers	Short-medium	1.2.1.1.a
.02	Develop animal/fish/plant systems to maximise byproduct/inter-product use	Farm families	Short-medium	1.2.5.02
1.2.4	**Improved grazing land utilisation/management**			
.01	Investigate effect on pastures of prolonged non-grazing periods resulting from mines	Agencies/Kuchis	Medium-long	
.02	Implement community consultations with kuchi groups on rangeland management	Agencies/Kuchis	Medium-long	
.03	Develop options for grazing management within the traditional pastoral system	Kuchis/Agencies	Medium-long	

Programmes have commenced to expand the available range and use of fodder crops to improve the quality of livestock feed and widen crop rotations to improve soil fertility. However, much more needs to be done in this area to establish sound technical knowledge of the available options and to ensure adoption of this knowledge by farmers.

3.2.2 Increased Horticulture and Agro-forestry Production

Afghanistan has an excellent climate for tree production. Temperate fruits and nuts of every sort - almonds, apples, apricots, grapes, mulberries, peaches, pomegranates, plums and walnuts - grow prolifically. Fruit production is both a significant potential source of food and an opportunity for farmers to develop commercial, as distinct from subsistence activities. Historically, Afghanistan was a recognised fruit producer with a substantial export trade to regional and international markets. Fuel wood and timber for commercial uses are in short supply. There are a range of opportunities to develop integrated fruit and timber production systems.

Specific Objective 1.2.5	Increase horticultural and integrated agroforestry activity and production
Intervention level	Farmers and households, agricultural traders
Approach	Increase the planting of improved varieties of fruit and nut trees, raise farmers knowledge and skills in tree husbandry and pest management, expand markets for fruits and nuts, develop integrated tree cropping systems for fodder and fuelwood.

Many of the tree-based production systems suffered badly from neglect when farming areas were abandoned during the war period. In recent years a number of highly successful programmes have been implemented to extend orchard production, including establishing private commercial nurseries with selected varieties of improved types of fruit trees. There are substantial benefits to be gained from extending these activities. A key challenge will be to put in place and strengthen marketing systems to maximise the incomes realised from expanded horticultural production. Selected interventions are proposed in Section 2.5.

Project concepts to implement tree crop development are set out in Table 5.

Table 5. Increased horticulture and integrated agroforestry production

No	Project concepts by Immediate Objective Activity Level	Target Group	Time period	Linkages
1.2.5	**Increase horticultural and integrated agroforestry activity and production**			
.01	- Extend the development of horticultural nurseries/orchards for commercial fruit production	Farmers	Short-medium	
.02	- Raise standards of orchard management and husbandry practices	Farmers	Short-medium	
	- Train trainers in Integrated Pest Management, crop care and presentation of produce	Expert farmers	Short-medium	
.03	- Assist in the development of markets for commercial fruit production	Farmers/Traders	Short-medium	
.04	- Develop horticulture-based agroforestry system for fruit, nuts and timber	Farmers	Medium-long	
.05	- Develop animal-linked horticultural-based agroforestry systems	Farm families	Medium-long	1.2.3.02
.06	- Develop integrated herbaceous legume/wheat cropping system	Farmers	Medium-long	
.07	- Develop extensive fodder tree and fuel wood production for grazing land improvement	Farmers/kuchis	Medium-long	

The few examples in Afghanistan of integrated tree crop systems offer an indication of what could be gained by increasing village-level food and income generation. Mulberry trees grown around a fishpond can feed both the fish and silkworms, generating food and cash and subsequently providing usable timber. There is great scope for using fast-growing poplars for commercial timber. There are a number of fast-growing leguminous trees which provide fodder for livestock and can be used to stabilise erosion and revegetate rangelands.

2.4 WATER RESOURCE MANAGEMENT

Water is the scarcest resource in Afghan agriculture. In the narrow valleys of the mountain areas, land may be the limiting resource for individuals or communities. On a national scale however, it is the volume and reliability of water which limits what can be produced.

Much of irrigated agriculture in Afghanistan is opportunistic. Water supply is seasonal and uneven, both within and between years. Where possible, farmers will plant as much area as they think they will be able to water, but if supply runs short some is abandoned. Much water is wasted on fields which are not level and also through over-watering. The food supply from irrigated agriculture can be both increased and stabilised by improving the efficiency of use of the available water.

Immediate Objective 1.3	Increase food production and stabilise food security through improved water resource management
Intervention level	Irrigation farmers, traditional irrigation managers (*mirabs* and *wakils*), communities
Approach	Improve the efficiency of irrigation through the refurbishment of canals and drains and improved in-field levelling, supported by system-wide water management planning; train traditional water managers and farmers to improve water-use efficiency and support with extension activity; develop regional water resource management approaches.

Project concepts for improved water resource management are set out in Table 6.

Table 6. Water resources management

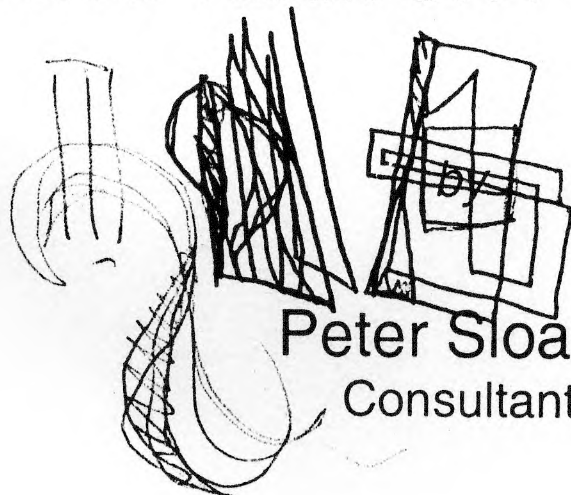
No	Interventions and Activities	Target Group	Time period	Linkages
1.3.1.	**Increase/stabilise food production by improved irrigation efficiency**			
.01	- Commence effective system-wide planning of individual irrigation systems on regional basis	Communities	Short-ongoing	1.3.2.01
.02	- Identify and implement canal and drainage refurbishment activities	Irrig'n farmers	Short-medium	1.1.2.03
.03	- Design and implement replicable mechanised high-tech in-field levelling system	Irrig'n farmers	Short-medium	
.04	- Develop community concepts of water-use efficiency and train mirabs	Farmers/Mirabs	Short-medium	
.05	- Support mirabs with extension activity	Mirabs/Wakils	Short-medium	
1.3.2	**Develop regional water resource management policies and actions**			
.01	- Undertake rapid surveys of drought impacts on water resource utilisation	Agencies	Short-ongoing	1.3.1.01
.02	- Develop regional/district-based responses to identified water resource management problems	Agency/Cmnt'y	Short-medium	1.3.1.02
.03	- Assist regional/local authorities/communities to implement resource protection actions	Communities	Short-medium	

DRAFT
SUBJECT TO REVISION

PROPOSED FOOD SECURITY STRATEGY FOR AFGHANISTAN

prepared for the

WORKING TEAM ON FOOD SECURITY



by

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ISLAMABAD

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